

Amendments to the Claims

Please amend the claims as indicated.

1. (Currently Amended) A client apparatus for data access on a storage device connected to a storage area network, the apparatus comprising:

a first network interface configured to allow the apparatus to communicate with a storage server;

a second network interface configured to allow the apparatus to communicate with a storage device on a storage area network;

a storage management client configured to communicate with the storage server and coordinate use of the storage device;

a storage agent comprising a metadata management module configured to minimize metadata processing on the apparatus by communicating metadata to the storage server to be exclusively stored in a centralized metadata database on the storage server, the metadata comprising a file data characteristic, a device characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with file data corresponding to a client, and stored on a specified volume; and

the storage agent receiving a write request from the client;

the storage agent further comprising a volume management module that sends a volume access request for the specified volume to the storage server, receives an available volume notification for the specified volume from the storage server, and sends a mount request to a storage device to mount the specified volume; and

[[a]]the storage agent further configured to communicate a volume attribute request to the storage server, receive the metadata from the centralized metadata database of the storage server, ~~write to~~ access the file data on the specified volume using the metadata, and send updated metadata to the storage server.

2. (Currently Amended) The apparatus of claim 1, further comprising a volume management module configured to request exclusive access to ~~[[a]]~~the specified volume.

3. (Currently Amended) The apparatus of claim 2, wherein the volume management module is further configured to request priority access to the specified volume.

4. (Currently Amended) The apparatus of claim 2, wherein the volume management module is further configured to terminate the write data~~-access~~ on the storage device in response to a preemption notification from the storage server.

5. (Currently Amended) The apparatus of claim 2, wherein the volume management module is further configured to send a volume termination notification to notify the storage server in response to a completed write data~~-access~~ operation.

6. (Canceled)

7. (Original) The apparatus of claim 1, further comprising a write module configured to write the file data to a storage device.

8. (Original) The apparatus of claim 1, further comprising a read module configured to read the file data from the storage device.

9. (Original) The apparatus of claim 1, further comprising a failover module configured to communicate the file data to the storage server in response to a data access failure.

10. (Currently Amended) A server apparatus for data access management on a storage device connected to a storage area network, the apparatus comprising:

a first network interface configured to allow the apparatus to communicate with a storage agent;

a centralized metadata database configured to exclusively store metadata from the storage agent, the metadata comprising a file data characteristic, a device characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with file data stored in a specified volume, and received by the storage agent from a client via a data access request; and

a storage manager configured to manage a write request data access-by the storage agent to a storage device, wherein the storage manager receives a volume access request for the specified volume, communicates an available volume notification for the specified volume to the storage agent, receives a mount request from the storage agent for the specified volume, mounts the specified volume, on the storage device, receives a volume attribute request from the storage agent, communicates the metadata from the centralized metadata database to the storage agent, and receives updated metadata from the storage agent.

11. (Canceled)

12. (Original) The apparatus of claim 10, further comprising a second network interface configured to allow the apparatus to communicate with the storage device on the storage area network.

13. (Currently Amended) The apparatus of claim 10, wherein the storage manager is further configured to preempt use of [[a]]the specified volume by a non-priority storage agent in response to the volume access request from a priority storage agent.

14. (Previously Presented) The apparatus of claim 10, wherein the storage manager is further configured to update the centralized metadata database with the updated metadata in response to receiving the updated metadata from the storage agent.

15. (Currently Amended) A system for data access management on a storage device connected to a storage area network, the system comprising:

a first network configured to communicate network data;

a second network configured to communicate file data between a node and a storage device;

a storage server connected to the first network, the storage server having a storage manager and a centralized metadata database, the storage server configured to manage a ~~written data access~~ to the storage device;

a client computer connected to the first and second networks, the client computer having a storage management client, a metadata management module, and a storage agent, the storage management client configured to communicate with the storage server and coordinate use of the storage device, the metadata management module configured to minimize metadata processing on the client computer by communicating metadata to the storage server to be exclusively stored in the centralized metadata database, the metadata comprising a file data characteristic, a device characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with the file data, and stored on a specified volume, and the storage agent configured to receive a write request, send a volume access request to the storage server for the specified volume, receive an available volume notification for the specified volume from the storage server, send a mount request to the storage device to mount the specified volume, communicate a volume attribute request to the storage server, receive the metadata from the centralized metadata database of the storage server, write to access the file

data on the specified volume using ~~with~~ the metadata, and send updated metadata to the storage server.

16. (Currently Amended) The system of claim 15, wherein the client computer further comprises a volume management module configured to request exclusive access to ~~[[a]]~~the specified volume.

17. (Original) The system of claim 15, wherein the client computer further comprises a failover module configured to communicate the file data to the storage server in response to a data access failure.

18. (Previously Presented) The system of claim 15, wherein the storage server is further configured to update the centralized metadata database with the updated metadata in response to receiving the updated metadata from the storage agent.

19. (Currently Amended) A computer readable storage medium comprising computer readable code configured to carry out a method for data access management on a storage device connected to a storage area network, the method comprising:

receiving a write data access request from a client, the write data access request including metadata comprising a file data characteristic, a device characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with file data corresponding to the client, and stored on a specified volume on the storage device;

sending a volume access request for the specified volume to the storage server;

receiving an available volume notification for the specified volume from the storage server;

sending a mount request to the storage device to mount the specified volume;

communicating a volume attribute request to a storage server;

receiving the metadata from a centralized metadata database of the storage server;

processing the metadata at a storage agent;

~~writing to accessing a storage device for the data file on the storage device using~~with the metadata according to a volume management scheme; and

communicating updated metadata to the storage server and exclusively storing the updated metadata in the centralized metadata database.

20. (Currently Amended) The computer readable storage medium of claim 19, wherein the method further comprises the managing data access by the storage agent to [[a)]the storage device.

21. (Original) The computer readable storage medium of claim 19, wherein the method further comprises communicating the file data to the storage server in response to a data access failure.

22. (Canceled)

23. (Original) The computer readable storage medium of claim 19, wherein the method further comprises preempting use of a volume by a non-priority storage agent in response to a volume access request from a priority storage agent.

24. (Canceled)

25. (Currently Amended) A method for data access management on a storage device connected to a storage area network, the method comprising:

receiving a data access request from a client, the data access request including metadata comprising a file data characteristic, a device

characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with file data corresponding to the client, and stored on a specified volume;

sending a volume access request for the specified volume to a storage server of the storage area network;

receiving an available volume notification for the specified volume from the storage server;

sending a mount request to the storage device to mount the specified volume;

communicating a volume attribute request to a storage server;

receiving the metadata from a centralized metadata database of the storage server;

processing the metadata at a storage agent;

writing to accessing a storage device for the data file on the storage device usingwith the metadata according to a volume management scheme;

communicating updated metadata to a storage server and exclusively storing the updated metadata in the centralized metadata database.

26. (Currently Amended) The method of claim 25, further comprising managing the data access by the storage agent to ~~[[a]]the~~ storage device.

27. (Original) The method of claim 25, further comprising communicating the file data to the storage server in response to a data access failure.

28. (Canceled)

29. (Currently Amended) An apparatus for data access management on a storage device connected to a storage area network, the apparatus comprising:

means for receiving a write data access request from a client, the write data access request including metadata comprising a file data characteristic, a device characteristic, a media characteristic, a positioning indicator, and an append position indicator, associated with file data corresponding to a client, and stored on a specified volume on the storage device;

means for sending a volume access request for the specified volume to a storage server the storage area network, receiving an available volume notification for the specified volume from the storage server, and sending a mount request to the storage device to mount the specified volume;

means for communicating the metadata to a storage server and exclusively storing the metadata in a centralized metadata database on the storage server; and

means for communicating a volume attribute request to the storage server, receiving the metadata from the centralized metadata database of the storage server, writing to accessing the file data on the specified volume using with the metadata, and sending updated metadata to the storage server.